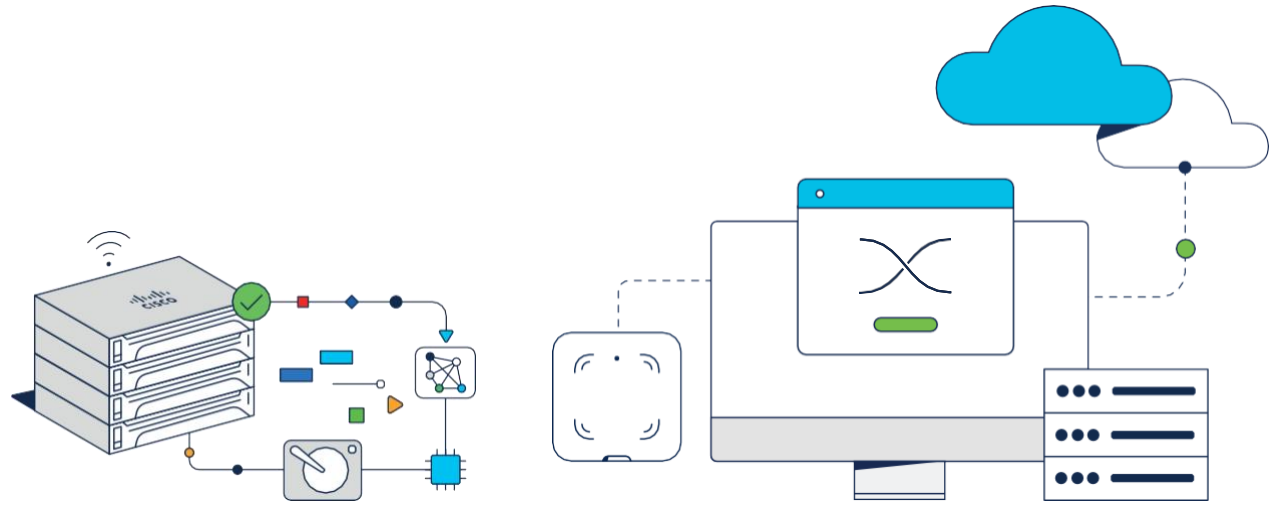




CISCO

Cisco IR1000 Rugged Series Secure Routers

WAN and Routing License Feature Matrices



Cisco WAN Essentials and Advantage Feature Set

	WAN Essentials	WAN Advantage
License type	Term-based Software Subscription	
Management option - Cisco Catalyst SD-WAN Manager ¹	Customer/Partner hosted and managed (Cloud/On-Prem)	

		WAN Essentials	WAN Advantage
Topology and Connectivity	Topology: Flexible topology including hub/spoke, full mesh and partial mesh Connectivity: Ethernet, DSL, 5G/4G LTE, Satellite, MLPPP, PPPoE, IPoE, Etherchannel	✓ VPNs limited to 10 VPN + 1 Management	✓
Layer 2 and Layer 3 Routing	Static Routing, Dynamic Routing, Routing Protocol Redistribution, BFD, Path MTU, Overlay Management Protocol, Data Policy, DHCP, End-point Tracker, Enhanced Application Aware Routing, Enhanced Policy-based Routing, Custom Application Aware Routing, EVPN, L2VPN, NAT, NAT64, QoS, Fragmentation and Reassmbly, Dual-stack support for LAN and WAN connectivity, VRF (VPN)	✓	✓
Services	Software Defined Application Visibility and Control (SD-AVC), Flexible Netflow, DNS (including local bypass), Application Quality-of-Experience (AppQoE: Forward Error Correction, Packet Duplication, TCP WAN Optimization), Stateful Interchassis High Availability (B2B HA for NAT, Firewall)	✓	✓
Security	ACL, L3-L7 Firewall, Custom Application for Security Policy, FW Policy version control and rollback, Cisco Secure Services Edge (SSE) Integration with Cisco Secure Access, MACsec, Service Chaining, Roaming User Protection, SSL Proxy	✓	✓
Multicloud and SaaS	Cloud OnRamp for Multicloud (AWS, Azure, GCP) – Site to Cloud connectivity, Cloud OnRamp for SaaS, Monitoring capabilities, SD-WAN Application Intelligence Engine (SAIE), Service Chaining	✓	✓
High Availability	TLOC Extension, VRRP, HSRP	✓	✓
Network Management	On-prem deployment, Role-Based Access Control (RBAC), License Management, Application Catalog, Compliance Dashboard, Certificate Management, Configuration Catalog, Zero-touch provisioning and onboarding, IoT app life cycle management and monitoring (cybervision, SEA, 3rd party app), High Availability/Disaster Recovery, SSH, SNMP, NTP, Ping, Traceroute, IP Name Server, Applications Health Monitoring, Network Monitoring Dashboards, Report Generation, Network Wide Path Insights (NWPI), On Demand Troubleshooting, Underlay Measurement and Tracing Services, Sustainability and Energy Management, Topology Visualization, TACACS, Cisco ThousandEyes	✓	✓
Integration	Identity Services Engine (ISE), RADIUS, Single Sign-On (SSO) support with SAML2.0, eSim Cellular Providers, Common Policy for Multi-domain	✓	✓
Unified Communication	CUBE, Media Proxy and LGW (including Webex managed gateway), SRST and eSRST, Webex Site Survivability gateway (SGW), MTP (Additional CUBE, Media Proxy, SRST licenses may be needed)	✓	✓
Advanced Topology	Multi Region Fabric (MRF), Multi-tenancy Edge, SD-WAN Remote Access (SD-WAN RA)		✓
Advanced Layer 2 and Layer 3 Routing	Per-VPN QoS, Adaptive QoS Support, Dynamic On-demand Tunnel, Multicast, App-aware Routing Policy for Multicast		✓
Advanced Services	Advance Application Quality-of-Experience: Multiple Service Nodes, Data Redundancy Elimination (DRE)		✓
Advanced Multicloud and SaaS	Cloud OnRamp for SaaS with Cisco Catalyst SD-WAN Analytics ² and Telemetry, M365 Informed Network Routing, Webex telemetry, Cloud OnRamp for Multicloud – Site to Site and Cloud to Cloud connectivity via mid-mile with Cloud Interconnect/Cloud Backbone, Service Chaining, Service Creation/Discovery		✓
Analytics and AIOPs	Data visualization up to 12 weeks for dashboards, Predictive Path Recommendations, Bandwidth Forecasting, Anomaly Detection, Advisories (Security Advisory, Field notices), Firewall Logging on Manager (log retention up to 30 days)		✓

Per-Device Management Add-Ons		
Cloud ²	Cisco Hosted Cloud Management : Multi-Tenant Instance - Provisioning, Infrastructure and Software Upgrades, Monitoring, Disaster Recovery and Backup, Certificate Management, and Choice of Continent	Add-on to WAN Ess/WAN Adv
Cloud Pro ² (includes all services/value-add in Cloud)	Cisco Hosted Advanced Cloud Management : Private Instance - Software version and upgrade schedule control, choice of Sub-location/region for deployment, Commercial Certifications, IdP integration, Custom VPC support, and Multi Region Fabric. Choice of Cloud Service Provider - Available with a special SKU	Add-on to WAN Ess/WAN Adv
For more information on Cloud vs. Cloud Pro, please visit: https://www.cisco.com/c/en/us/td/docs/routers/sdwan/knowledge-base/CloudOps/b-cisco-sdwan-cloudops/m-cloudops-overview.html		

Per-Device Feature Add-ons		
Security - Threat	IPS/IDS with support for Custom Signatures, Whitelisting, Editable IPS Profiles	Add-on to WAN Ess/WAN Adv/Routing Adv
Security - Malware Defense	File Reputation Check, File Analysis	Add-on to WAN Ess/WAN Adv/Routing Adv
Security - URL Filtering	Web Category and Reputation, Whitelisting, Custom Block Messages	Add-on to WAN Ess/WAN Adv/Routing Adv

¹ The WAN Essentials license entitles Routing Advantage. The WAN Advantage license entitles both WAN Essentials and Routing Advantage

² The Cisco WAN Essentials and WAN Advantage Subscription includes the right to use on-premise Catalyst SD-WAN Manager/Orchestrator/Controller. For Cisco Hosted cloud control components, additional Management Add-on licenses are required.

³ Cisco Catalyst SD-WAN Analytics, Cisco Catalyst SD-WAN hosted in the Cisco cloud environment, cloud-delivered Cisco Catalyst SD-WAN, and other cloud features cannot be used by customers headquartered or mainly based in Mainland China.

Cisco OS Essentials and Routing Advantage Feature Set

		OS Essentials	Routing Advantage
License type		Embedded Perpetual Software	Embedded Perpetual Software
Management Option		CLI/Web UI	CLI/Web UI
		OS Essentials	Routing Advantage
Connectivity	Ethernet, DSL, 5G/4G LTE, Satellite, MLPPP, PPPoE, IPoE, Etherchannel	✓	✓
Layer 2 and Layer 3 Routing	BDI, PPPoE, PPPoA, L2TPv2, ISDN BRI, X.25 and XOT, RIP, OSPF, BGP, EIGRP, IGRP, IS-IS, ODR,PPP,MLP, TCP, SCTP, BFD, LACP, PAgP, EtherChannel, LLDP, 802.1Q, IPSLA (Initiator & Responder), TCP connect, HTTP, FTP, DHCP, QoS, HQoS, 802.1P, PBR, ARP, NAT/PAT, Application Layer Gateway (ALG), URPF, GRE, IPv6 over IPv4 and IPv4 over IPv6 Tunnelling, EVN, VRF-Lite, VRF/Multi-VRF, SRv6 L3VPN Basic Multicast: Bi-Di PIM, IGMP, Protocol Independent Multicast (PIM), CGMP, AutoRP, Bootstrap Router (BSR), mroute, MLD (v1, v2), extending SSM support (PIM-SSM, IGMPv3 with SSM), SSM-Mapping, Multicast Source Discovery Protocol (MSDP)	✓	✓
Carrier Ethernet	CFM-802.1ag, OAM - 802.3ah, E-OAM, E-CFM	✓	✓
Services	Flexible NetFlow, IPFIX, perfMon, FPM, DNS, DDNS	✓	✓
Security	PKI, CHAP and PAP, Certificate Authority, L3/L4 Firewall, ACL, Trustworthy Solutions, 802.1X, SHA-2, RADIUS, AAA, TACACS/TACACS+	✓	✓
Encryption and VPN	P2P IPsec - Up to 250Mbps Crypto aggregate	✓	✓
High Availability	HSRP, VRRP, GLBP	✓	✓
Network Management	TR-069, TR069-CWMP, NTPv4, CDP, CoPP, SPAN, RSPAN, NETCONF/YANG, PnP/ZTP, EEM, RESTCONF, GNMI, gRPC	✓	✓
Advanced Layer 2 and Layer 3 Routing	Basic CLNS functionality, Radio-Aware Routing (RAR, PPPoE based-RFC 5578), Mobile IP, Proxy Mobile IP (PMIP), MPLS L2 and L3 VPN, L2 VPN Pseudowire (PW), EoMPLS), AToM), MPLS TE, LDP, VPLS, H-VPLS, EVPN, SR-MPLS and SRv6 Traffic Engineering, SR Flex Algo, SRv6 L3VPN, SR-MPLS L2 and L3 VPN, ISATAP tunnels, 6RD tunnels, L2TPv3, VPDN, L2 forwarding, EoGRE, OTV, VRF Aware Services Infrastructure (VASI), VXLAN, LISP Advanced Multicast: Pragmatic General Multicast (PGM), Router Group Management Protocol (RGMP), Multicast Service Reflection, Multicast VPN, Ingress Multicast Replication over SRv6		✓
Advanced Carrier Ethernet	ELMI, EVC, Ethernet Flow Point		✓
Advanced Services	Carrier Grade NAT (CGNAT), NBAR2, Software Defined Application Visibility and Control (SD-AVC), Broadband Network Gateway (LAC, LNS), Intelligent Services Gateway (ISG), Intelligent Wireless Access Gateway (iWAG), mDNS		✓
Advanced Security	WAN MACsec, LAN MACsec, Cisco TrustSec (SGT, SGACL, SGX), Encrypted Traffic Analysis (ETA), L7 Firewall		✓
Advanced Encryption and VPN	DMVPN, GETVPN, FlexVPN, P2P IPsec		✓
Advanced High Availability	Stateful Interchassis High Availability (B2B HA for NAT, Firewall), Object Tracking		✓
Advanced Network Management	UDLR, Guest Shell, Application Hosting, ERSPAN, VoIP (UDP jitter, RTP, H323, MOS), video ops, TWAMP, monitor, schedule, disc (for LSP), Y.1731, MPLS OAM, EPC, SMU		✓
Unified Communication	CUBE, Media Proxy and LGW (including Webex managed gateway), SRST and eSRST, Webex Site Survivability gateway (SGW), MTP (Additional CUBE, Media Proxy, SRST licenses may be needed)		✓
IIoT Specific Features	450 MHz PIM support, Edge Intelligence, SCADA (protocol translation and Raw socket)		✓

Per-Device Management Add-Ons¹

Field Network Director	Device Management, Monitoring and Visibility, Configuration Management, Software Image Management	Add-on to Routing Essentials/Advantage
On-Prem SD-WAN Manager (Required for Security Feature Add -ons)	Device Management, Monitoring and Visibility, Configuration Management, Software Image Management	Add-on for Routing Advantage

¹The Cisco Routing Advantage license requires additional On-Prem Management Add-on Licenses to use on-premise SD-WAN manager.